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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,257	03/31/2004	Jennifer Dean	139361-2	7461
43248	7590	09/15/2005	EXAMINER	
CANTOR COLBURN LLP 55 GRIFFIN RD SOUTH BLOOMFIELD, CT 06002			BOYKIN, TERRESSA M	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,257

Applicant(s)

DEAN ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4-5, 9-22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5 and 9-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-16-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Applicant's arguments with respect to claims 1-2, 5, 9-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 , 4-5, 9-22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5071884 see cols 2-8, tables 1 and 2, and claims 1, 2, 3, 4, 5, 7, 9, 11, and 12.

USP 5071884 discloses polyolefin foams and films having improved electrostatic properties are provided by incorporating into the polyolefin foam or film a novel antistatic additive composition comprising 0.1 to 10 parts per hundred based on the weight of the olefin polymer of a quaternary ammonium salt and 0.1 to 10 parts per hundred based on the weight of the olefin polymer of a partial ester of a long-chain fatty acid with a polyol. A method of making the foam containing the novel antistatic additive composition is also disclosed therein.

The referenc discloses that there are several types of chemical antistatic compounds generally available. These include: cationic compounds, such as long-chain (those generally having about 4-22 carbon atoms) quaternary ammonium, phosphonium or sulfonium salts with, for example, chloride counter ions; anionic compounds, such as

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alkali salts or alkyl sulphonic, phosphinic, dithiocarbamic, or carboxylic acids; and nonionic compounds, such as ethoxylated fatty amines, fatty acid esters, ethanolamides, polyethylene glycol-esters, polyethylene glycol-ethers, and mono- and di-glycerides. The quaternary ammonium salts are those antistatic compounds as generally defined in the literature with a cation of a central nitrogen atom joined to four organic groups and an anion of an acid radical. Examples include, *but are not limited to* octadecyldimethylbenzyl ammonium chloride, hexamethonium chloride, soya dimethyl ethyl ammonium ethylsulfate, soya dimethyl ethyl ammonium phosphate, soya dimethyl ethyl ammonium ethylphosphate,

Typically, such quaternary ammonium salts are employed in an amount ranging from about 0.05 to about 10 parts per hundred based on the weight of the olefin polymer employed. Preferably they are employed in an amount ranging from about 0.05 to about 5 parts per hundred.

The reference recognizes that accumulation of electrostatic charges on all types of polymeric materials has been a long-standing problem, and a variety of techniques have been proposed to alleviate the problem. For example, compounds which migrate to the surface of the plastic or fiber have been incorporated in the composition to modify its electrical properties. Antistatic resins have been copolymerized with the base polymer in an effort to provide improved properties. Other antistatic compounds, such as quaternary (quaternary) ammonium salts, have been applied topically, i.e., by impregnation, or incorporated directly into the polymeric materials to provide a finished, or semi-finished product with improved antistatic properties.

The reference also recognizes that it is known that certain quaternary ammonium salts can be added during the manufacture of polyurethane foam to impart improved

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antistatic properties to the cured foam. U.S. Pat. No. 3,933,697 discloses specific quaternary ammonium salts that can be incorporated as an ingredient into the composition prior to commencement of the foam-forming reaction; alternatively, it is suggested that the same compounds can be applied by impregnation of the finished urethane foam. U.S. Pat. No. 4,605,684 discloses the introduction of an antistatic additive composition prior to polymer formation of specific quaternary ammonium compounds and specific plasticizer compounds into a reaction mixture to form an antistatic polyurethane foam.

The reference has found that quaternary ammonium salts, when combined with one or more partial esters of a long-chain fatty acid with a polyol provide an improved antistatic additive composition and that this antistatic additive composition can be incorporated into polyolefin products, including foam and film, to provide remarkably improved antistatic properties in the finished foam product. Also, another aspect of the reference is that the quaternary ammonium salt compound must be either melted or in solution and the compound must be added after the polyolefin is heat plastified to become a flowable gel. Most significant is the discovery that a quaternary ammonium salts, when used together with a partial ester of a long-chain fatty acid with a polyol to provide an antistatic additive composition, exhibit a synergistic effect. This effect occurs both when this antistatic additive composition is added to either polyolefin foam-forming reactants or film-forming reactants. The antistatic additive composition provides finished products, including foam and film, having greatly improved antistatic properties. This synergism is demonstrated by the fact that significant improvement of antistatic properties in the finished products foam are observed when both compounds of the antistatic additive composition are used, as opposed to just either compound by itself.

Polyolefin resins suitable for use in the reference are disclosed as ethylene homopolymers such as low, medium, or high density polyethylene, and ethylene copolymers such as ethylene-vinyl acetate copolymers, ethylene-propylene copolymers, ethylene-1-butene copolymers, ethylene-butadiene copolymers, ethylene-vinyl chloride copolymers, ethylene-methyl methacrylate copolymers, ethylene-acrylonitrile copolymers, ethylene-acrylic acid copolymers, ethylene/carbon monoxide copolymers, and the like. As the polyolefin resin, it is preferable to use an ethylene homopolymer or a copolymer having an ethylene content above 50 percent by weight, preferably above 75 percent by weight. Additionally, blends of two or more of such olefin polymer resins can also be suitably employed in the practice of the present invention.

Particularly preferred thermoplastic polyolefin resin compositions include copolymers of ethylene and a copolymerizable polar monomer especially a carboxyl-containing comonomer. Examples include copolymers of ethylene and acrylic acid or methacrylic acid and C.sub.1-4 (1-4 carbon atom containing) alkyl ester or ionomeric derivatives thereof: ethylene vinyl-acetate copolymers: ethylene/carbon monoxide copolymers: anhydride containing olefin copolymers of a diene and a polymerizable; copolymers of ethylene and an alpha-olefin having ultra low molecular weight (i.e. densities less than 0.92): blends of all of the foregoing resins; blends thereof with polyethylene (high, intermediate or low density); etc.

Tables 1 and 2 indicate the amount of the quaternary ammonium salt used in each example, based on resin weight.

Note claims 1. 2. 3. 4. 5. 7. 9. 11. 12.

In conclusion, the reference discloses a composition prepared from the same components as claimed by applicants, i.e., a thermoplastic polymer and a polymeric anti-static salt comprising the components as claimed by applicants. Although applicants amendments further advance the prosecution of the claims to a position of allowability, it remains that the claim when broadly interpreted by the specification while remaining within scope with the specification still render the claim anticipated by the prior art.

Thus, in view of the above, there appears to be no significant difference between the reference and that, which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

Correspondence

Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is (571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb


Examiner Terressa Boykin
Primary Examiner
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